



# *X-Plain™*

## *Bone Densitometry*

### **Reference Summary**

Bone densitometry is a helpful radiological test for detecting the early stages of osteoporosis, before any symptoms occur.

Your doctor may have requested that you have a bone densitometry test performed.

This reference summary will help you understand bone densitometry and its importance in treating and preventing osteoporosis.

### **Osteoporosis**

Osteoporosis is a very common condition that mostly affects women. Men can be affected by it too, though less frequently.

Osteoporosis is a major cause of hip and vertebral fractures in older people. Our bones are continually being replaced. New bone is deposited while the body recycles old bone.

In a healthy person, new bone is as strong as the old bone.

In people with osteoporosis, new bone has less calcium in it and is therefore weaker than the bone it replaced.

As the new bone becomes weaker, it breaks easier. New bone in the hips and vertebrae has the highest possibility of becoming weak and breaking.

In women, estrogen is very important in preventing osteoporosis.

Women who have experienced menopause or have had their ovaries taken out surgically are at a higher risk of developing osteoporosis, due to the lack of estrogen.

Osteoporosis is hereditary, which means it runs in families.

Some medical conditions increase the risk of osteoporosis. For example, patients who must take steroids for a long time may develop osteoporosis because steroids can weaken the bones.



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Some antacids contain aluminum hydroxide, which prevents calcium from being absorbed by the body. People who take antacids regularly for a long time have a higher risk of developing osteoporosis.

Too little exercise, as well as bed rest, weakens the bones.

A diet low in dairy products and calcium can make osteoporosis worse.

Smoking and excessive use of alcohol tend to also make osteoporosis worse.

Sustained exercise, such as running marathons, decreases the levels of estrogen in the blood and may predispose to osteoporosis.

### **Bone Densitometry Test**

Bone densitometry is a radiological test that can diagnose osteoporosis early enough for it to be treated.

Bone densitometry is an outpatient radiological test. It is NOT painful.

Depending on what type of machine is used, you may be asked to either lie down on a table or put your ankle in a special device.

Most machines use x-rays but some use ultrasound.

A densitometry machine can calculate the density of bone and creates a chart that compares the patient's density to what the density should be. *Density* is the amount of calcium found in bone. The higher the density, the stronger the bone is.

Depending on the density levels found, the doctor may decide that the patient has normal bone density, a somewhat decreased bone density, or osteoporosis.

Bone density readings help doctors devise a plan to prevent or treat osteoporosis. A bone density test can be repeated every few years to check whether bones are the same or worsening.

Bone densitometry is very safe. However, the machines that use x-rays should not be used on pregnant woman. This is usually not a problem since osteoporosis usually happens during and after menopause.

### **Summary**

Osteoporosis is a very common condition that can be prevented with oral medication, staying active, and a healthy diet.

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Bone density tests are available and very helpful in detecting osteoporosis early.

Most patients with osteoporosis live very healthy and productive lives!

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